Neighborhood Traffic Management Program

Santa Rosa County, Florida
October 6, 2003

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INTRODUCTION

Residents of Santa Rosa County are part of a highly mobile population that must travel the County's roadways everyday for work, school, shopping and entertainment purposes. Most travel in this county is conducted in individually owned automobiles. More than 95% of the households in Santa Rosa County have direct access to a vehicle and 45% have two or more vehicles available. The overwhelming majority of Santa Rosa County residents, 81.7%, drive alone to work. These figures not only add up to increased congestion and traffic delay on major roadways, but also to increased traffic volumes and speeding on residential streets. Volume and speeding problems on local roads are detrimental to the quality of life of the residents and negatively impacts the serenity of the neighborhood.

As a result, Santa Rosa County has experienced an increased number of complaints about speeding and cut-through traffic on residential streets. In response to requests for action, the Santa Rosa County Board of County Commissioners (BOCC) created a new committee, the Traffic Calming Working Group, to address these issues. This document, the Neighborhood Traffic Management Plan, describes the process for managing requests, the methodology for assessing problems and provides guidelines for taking action.

The Santa Rosa County Neighborhood Traffic Management Program (NTMP) was created to respond to citizens' concerns about the speed and volume of traffic in their neighborhoods. It is a citizen based initiative. Santa Rosa County staff does not seek out areas or specific streets in need of traffic calming; the program is based on concerned citizens making an inquiry or request to the County for action. This reactive program is coupled with specific language in the County Land Development Code (LDC) that seeks to ensure that new development and redevelopment is designed to discourage speeding and cut-through traffic.

1.1 Purpose

The purpose of the Neighborhood Traffic Management Plan is to define a process for managing and dealing with complaints about speeding and cut-through traffic. It provides the administrative procedures for processing requests, evaluating the problem, involving the public, implementing solutions and monitoring the results. It sets forth specific thresholds that must be met to warrant action. The goal of this plan is to ensure that public resources are being allocated to those projects exhibiting the greatest need and that public funding is being used both efficiently and effectively.

1.2 Applicability

Roadways in the County are classified into three general categories, arterials, collectors and local streets. These categories reflect a street hierarchy based on speed and volumes. Roadways at the top of the hierarchy are intended to carry high volumes of vehicular traffic at relatively high speeds. These types of roadways are classified as arterials and include I-10, US98, US90, SR87, SR89 and Avalon Boulevard among others.

Roadways at the bottom of the classification are local, or residential, streets. These streets are intended primarily for access to property and are designed to carry low levels of traffic at relatively low speeds. The American Association of State Highway Transportation Officials (AASHTO) describes residential streets in the following way:

"The primary function of residential streets is to provide access to the homes that front those streets. The primary consideration, therefore, of residential street design should be to foster a safe and pleasant environment for the residents that live along the street and safe traveling conditions for motorists and pedestrians. The convenience of motorists is a secondary consideration. The street design should create an environment that cautions drivers that they are in a residential area where they must safely share the traveling space with pedestrians, bicyclists, both child and adult. Visual cues such as meandering streets, sidewalks, landscaping, signage, narrowed streets, changes in pavement texture, and raised crosswalks all serve to heighten drivers' awareness for the need to maintain lower speeds."

Collectors lie in the middle of this hierarchy. These roadways typically connect a network of local streets or a network of smaller collectors to an arterial roadway. Collectors carry more traffic than a local street, but less than an arterial. Generally, local streets carry fewer than 2000 vehicles a day, while arterials can carry anywhere from 15,000 to 60,000 vehicles a day in Santa Rosa County.

A neighborhood traffic management program is applicable only to streets classified as local or residential streets. Measures designed to impede, slow or divert traffic should not be applied to collector or arterial roadways. As much as possible, traffic flows and patterns should be managed in such a way that longer distance trips are made primarily on the collector and arterial system. In order for the NTMP to be effective, it is imperative that Santa Rosa County maintain the integrity of this infrastructure.

1.3 Goals & Objectives

The following goals and objectives were developed by the Traffic Calming Working Group and were used to guide the development of the Neighborhood Traffic Management Program.

Goal:	Promote safe and livable condition for motorists, bicyclists, pedestrians and neighborhood residents	**Objectives**:	1) Reduce speeds on residential streets using education, enforcement, passive engineering and physical measures, if necessary. 2) Reduce secondary impacts of traffic volumes and vehicular speed on residents (i.e. noise, exhaust) 3) Increase safety for all users by reducing the incidence of crashes
Goal:	Encourage citizen involvement in the traffic calming process and empower residents to have a positive impact on the traffic problems they see in their neighborhood.	**Objectives**:	1) Promote citizen sponsored safety awareness days 2) Encourage community discussion on proposed physical improvements

Goal:	Discourage use of residential streets by non-residential cut-through traffic	**Objectives**:	1) Ensuring safe residential speeds so that trip time is not decreased by using residential streets 2) Maintaining the integrity of the collector and arterial transportation network 3) Implementing physical measures to calm traffic

1.4 Principles & Policies

The Santa Rosa County Neighborhood Traffic Management Program is designed to meet the goals and objectives listed above. However, the development and implementation of the program is guided by the following principles and policies.

- **Traffic Safety is the top priority**
- **Consistency with the Comprehensive Plan must be maintained**
- **Traffic diversion onto parallel or alternate facilities should be considered**
- **Access must be maintained for emergency services, vehicles and sanitation services**
- **Construction of any kind should be coordinated with already planned projects**
- **Through traffic is encouraged to use higher classified streets**
- **Bicycle and pedestrian access shall be encouraged and enhanced whenever possible**
- **Installation of traffic control devices (signs and pavement markings) shall conform to the Manual on Uniform Traffic Control Devices (MUTCD)**

NEIGHBORHOOD TRAFFIC MANAGEMENT PROBLEMS

There are three major types of traffic problems that plague residential neighborhoods, speed, intrusions (cut through traffic) and volume.

2.1 Speed

Generally, speeding occurs on roadways, which, by design, allow the motorist to feel comfortable while exceeding the posted speed limit. Factors that contribute to this perception include long, uninterrupted sight distances, steep roadway grades, excessive pavement width, low density development, low pedestrian activity and deep building setbacks. Young drivers and non-residents are often accused of speeding infractions, but often drivers who consistently violate posted speed limits are local residents.

A common misconception is that reducing the speed limit will reduce the incidence of speeding. As explained above, motorists will generally travel at speeds that feel comfortable based on environmental conditions. Drivers will continue to travel at excessive speeds unless enforcement or physical devices are present to slow traffic. Lowering the posted speed compounds the problem by increasing the number of motorists exceeding the speed limit and can lead to a general disregard for the posted speed if it is lowered to an unnecessarily low limit.

The control of speeding traffic is the responsibility of several different groups. First, and foremost, roadways are designed to safely accommodate vehicular traffic, and it is up to drivers to obey the law regardless of how fast they feel the roadway will safely accommodate traffic. If motorists fail to comply, it is up to the Sheriff's Department to enforce safe speeds. Assuming that some motorists will regularly and habitually violate the posted speed limit if they feel safe and comfortable doing so, it is up to the County's engineers and planners to propose solutions that will make drivers feel uncomfortable exceeding the posted limit.

2.2 Cut-through Traffic

Cut-through traffic is non-local traffic on using local streets to avoid traffic congestion on collector or arterial roadways in an effort to save time. Some local streets invite more cut-through traffic than others because they are less impeded in the way they are designed or because they offer more direct connections to other collector or arterial roadways.

It is often difficult to determine if higher traffic volumes are actually the result of cut-through traffic. Many motorists can and should, indeed often they must, use streets they do not live on to access a collector or arterial roadways. Most neighborhoods are designed so that some streets gather more traffic than others. A cul-de-sac will certainly have lower traffic volumes than a street that leads directly to an exit from a subdivision. The more connections to collector or arterial roadways from a neighborhood, the more dispersed typical neighborhood traffic will be. A logical system of arterial, collector and local streets will provide for a proper distribution of traffic.

True cut-through traffic consists of motorists who do not have a destination in the local area. The Santa Rosa County NTMP attempts to measure cut-through traffic by comparing the amount of traffic during the busiest hour of the day to the amount of traffic in a 24 hour period. Since drivers will be more likely to divert onto local streets when traffic is heaviest on the collector and arterial system, higher than

normal volumes on residential streets during this time period can indicate a problem with cut-through traffic.

The control of cut-through traffic can be accomplished by several alternatives. Proper street design why land is being planned for development is the most sensible, least costly and easiest solution to control cut-through traffic. In already developed residential areas, the neighborhood physical modifications may have to be made to the residential streets to discourage non-local traffic. Finally and most importantly, the County must maintain the collector and arterial roadway system so that drivers do not have to divert from the primary system to decrease travel time.

2.3 Accidents and Safety

The safety of neighborhood residents, whether in a car, on a bicycle or on foot is of utmost importance to the County. Safety is an implied concern on streets experiencing speeding or cut-through traffic. The NTMP requires that accident history be considered in the study process and that the location of parks, schools or other pedestrian generators be inventoried. Any physical modifications to the roadway are designed to ensure that there is at least no degradation of safety and, if possible, the new design should increase safety.

TRAFFIC MANAGEMENT STRATEGIES

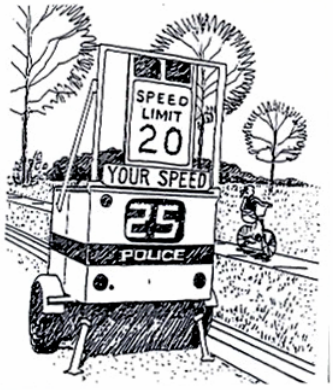
In developing the Santa Rosa County NTMP, County staff reviewed numerous programs both within Florida and around the nation and presented the common principles to the Traffic Calming Working Group. The working group chose to adopt a comprehensive strategy employed in the most successful traffic management programs. This comprehensive approach combines law enforcement, engineering and education

3.1 Education

Community education and participation are essential at every step in the traffic management program, but these activities must occur early in the process in order to lay the foundation for a successful effort in the neighborhood. A well-planned and executed community education program, if continually and creatively reinforced, can preclude the need for additional enforcement or re-engineering. These citizen based initiatives include such activities as:

- Distribution of informational flyers
- Posting yard signs throughout the neighborhood and specifically on problem streets
- Holding a small neighborhood rally to raise awareness
- Conducting a citizen radar campaign where residents are loaned radar guns and letters are sent to speed offenders

These activities can be supported by use of a radar SMART trailer, the presence of a uniformed officer or combined with additional enforcement.

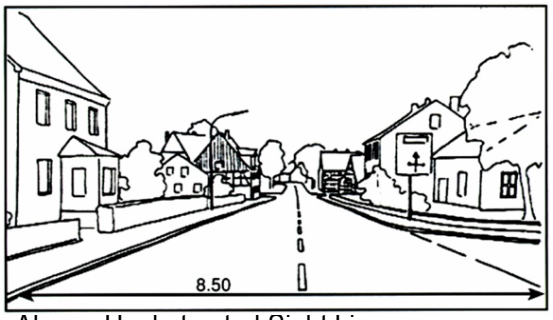


3.2 Enforcement

The Santa Rosa County Sheriff's Department routinely responds to requests for additional enforcement in areas of citizen concern. The Department will deploy an officer to conduct targeted enforcement for a specified period of time and will also locate one of the radar SMART trailers on the problem street to raise awareness about speeding. In the Santa Rosa County NTMP, the Sheriff's Department will work with County staff to coordinate these activities as necessary.

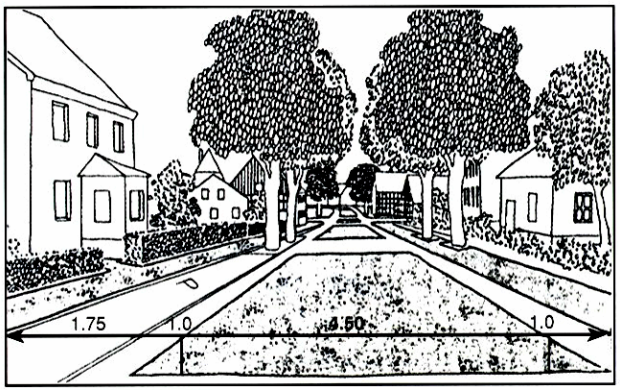
3.3 Engineering

The final component of the traffic management strategy is engineering. This refers to the physical modification of the roadway in order to affect traffic patterns. The Santa Rosa County NTMP uses a two-tiered engineering approach, passive and active engineering. Passive engineering includes adding signage, striping and other pavement markings to the roadway. These are typically easily installed, low cost projects that cause less physical disruption to the roadway. Streetscaping can also be considered a passive engineering strategy. The drawings below depict the impact streetscaping can have on the field of view.



Above: Unobstructed Sight Lines

Below: Interrupted Sight Lines



Active engineering involves making high impact alterations to the roadway and adjacent parcels of land. The types of projects in this tier are considered classic traffic calming measures. They include traffic circles, speed humps and tables and chokers among many others. Appendix A illustrates those devices approved for use in Santa Rosa County.

3.3.1 Traffic Calming

Throughout the country traffic calming has become a popular method for dealing with neighborhood traffic management problems. The Institute of Transportation Engineers (ITE) defines traffic calming as:

> "Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use. Alter driver behavior and improve conditions for non-motorized street users."

The purpose of traffic calming is to return streets to their intended function. Depending on the specific location and street classification, the function of the roadway is to provide both mobility and accessibility, but in differing combinations. Based on the specific function of the roadway and the character of the specific problem occurring there, the type of traffic calming measure employed will be different.

3.3.2 Volume Control vs. Speed Control

There are two general categories of traffic calming devices, those that directly impact vehicle speed and those that directly impact the volume of traffic. Examples of each appear below:

Speed Control
- Raised Crosswalk
- Raised Intersection
- Textured Pavement
- Chicanes
- Chokers/ Neckdowns
- Speed Humps/ Speed Tables
- Traffic Circles

Volume Control
- Full Roadway Closures (creates dead ends)
- Half Closures (right-turns allowed)
- Median Barriers
- Forced Turn Islands
- Diagonal Diverters
- One-Lane Slow Points

As shown in Appendix A, most of the traffic calming devices approved for use in Santa Rosa County are primarily intended for speed control. Often, devices that reduce speeds on residential streets will indirectly cause reduced traffic volumes as well. This is due to the fact that travel time is no longer decreased by using the residential route. Ideally, traffic will divert to collectors and arterials, but sometimes traffic will simply divert to other residential streets. The Santa Rosa County NTMP requires that impacts to adjacent or parallel facilities be considered. In cases where treatments on one facility would be detrimental to another, both facilities would receive treatment.

3.3.3 Potential Impacts

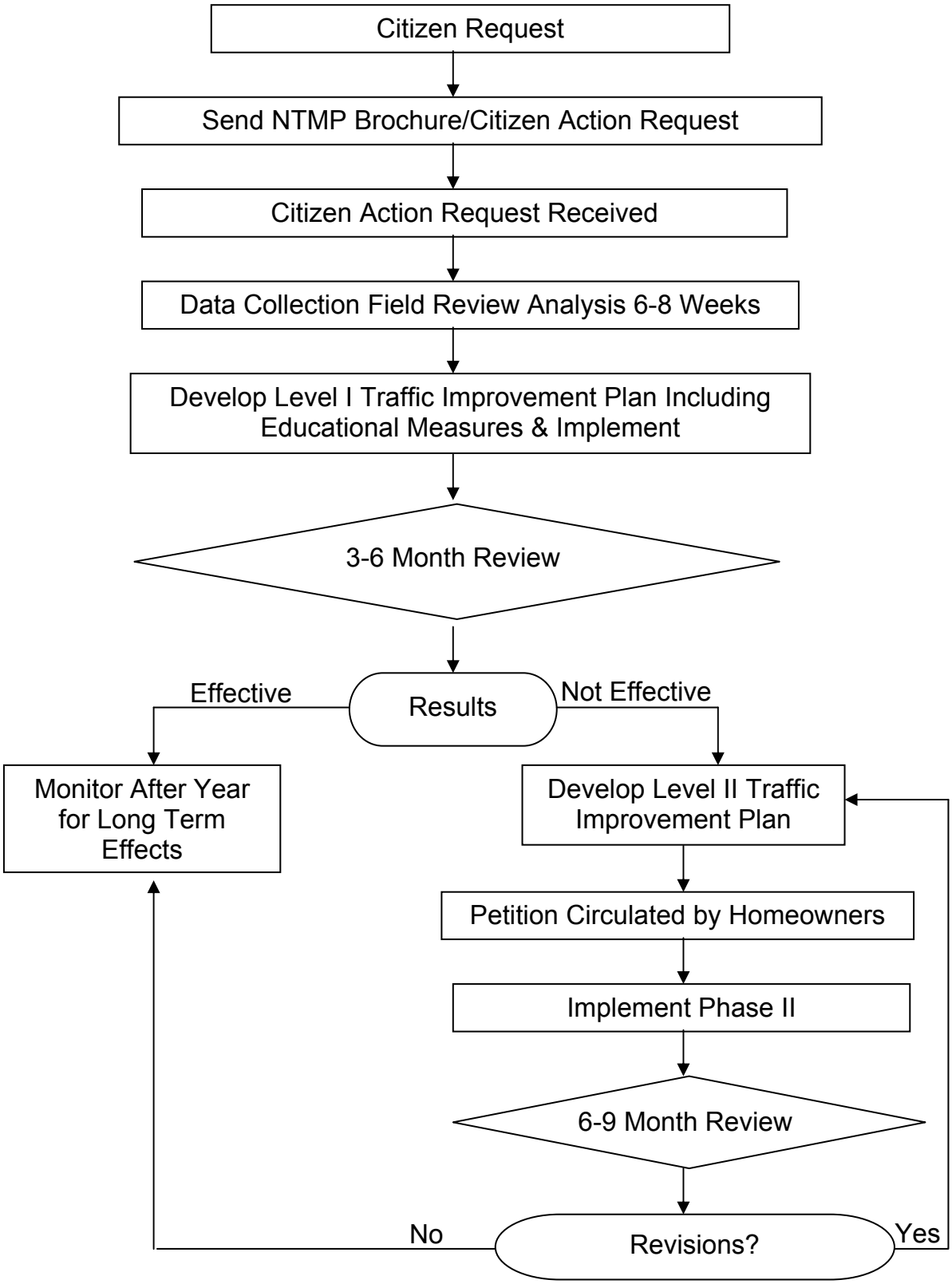
Although traffic calming has been in use nationwide for more than three decades, there is still significant controversy over traffic calming measures. This is due to the possible negative effects that traffic calming devices can cause; some of these effects are listed below.

	IMPACTED POPULATION	EFFECT
	Emergency Vehicles	Can increase response time
	Adjacent Neighborhoods	Can increase traffic volumes and speed
	Utility Vehicles	Can increase route times
	Other roadway users (bicyclists, pedestrians, roller bladers, handicapped etc…)	Increases likelihood of unintended negative impact in attempting to negotiate or circumvent the traffic calming device
	Residents immediately adjacent to device	Increases noise level from vehicles braking and going over and around the traffic calming device

The guidelines provided in the next section are intended to mitigate some of these negative impacts. The emphasis on public involvement should ensure that residents adjacent to the proposed treatments have provided informed consent. Emergency responders are included in the process at two different points to ensure that emergency services are not compromised. In additions, the specific devices approved for use in Santa Rosa County, were chosen based on impacts to roadway users and impacts to maintenance.

NEIGHBORHOOD TRAFFIC MANAGEMENT PROCESS

The flowchart below illustrates the neighborhood traffic management process. Each step in the process is explained in the following pages.



4.1 Citizen Request- Initial citizen requests will be fielded by the Planning and Zoning Department. The Department will distribute request submittal forms and informational materials.

- A Standard Submittal Form with Petition Template is included in the appendix
- Petition must be submitted with 66% of residents in favor of the County studying the traffic problem
- Requests are handled on a first come first served basis

4.2 Field Review/ Data Collection- Once the request is received, with the required petition, and scheduled, the requestor is notified of the scheduled time frame and data collection equipment and field review staff are deployed. Santa Rosa County will contract will a private consultant to collect the necessary traffic data (speed and volume counts).

- Step #1: Qualification- Determine if the roadway qualifies for traffic calming

Qualification Warrants	
Volume	≤ 2000 AADT
Functional Classification	Residential Street (not an arterial or collector)
Land Use	85% of adjacent land uses must be residential, institutional or recreational
Through Lanes	No more than 2 through lanes wide
Posted Speed	≤ 30mph
Minimum Street Length	1000 feet

- Step #2: Warrant Threshold (Quantitative Analysis)- Determine if the collected roadway data supports the need for traffic calming

    - To be eligible for the Neighborhood Traffic Calming Program, the project must achieve a total of twelve points according to the scale below. If the project does not meet the minimum criteria, neighborhood residents will still be supplied with educational and informational materials and may still contact the Sheriff's Department for targeted enforcement.

Warrant Threshold Point Scale				
Warrant Category	**0 Points**	**3 points**	**6 points**	**9 points**
SPEED: 85th Percentile	0-5.0 mph over posted speed limit	5.1-7 mph over posted limit	7.1-10 mph over posted limit	> 10mph over posted limit
VOLUME: AADT *or* Peak Hour Volume (PHV)	0-500 AADT 0%-5.0%	501-1000 AADT 5.1%-7% of AADT	1001-1500 AADT 7.1%-10% of AADT	1501-2000 AADT 10.1%- 15% of AADT
SAFETY: Midblock Crash Rates	0-0.9	1.0-1.9	2.0-2.9	3.0-3.9

- Step #3: Field Review (Qualitative Analysis)- County staff visit the site and collect the following qualitative data.
    - Environmental Review
    - Traffic Characteristics Inventory
    - Roadway Features Inventory
    - Coordination with Emergency Responders
    - Consider traffic diversion impacts to parallel or alternate facilities

4.3 Level I Traffic Improvement Program- If it is determined that the project qualifies for traffic calming and the conditions warrant action, Level I measures are employed. There are three components of the Level I Traffic Improvement Program:

- Education: Citizen Sponsored Safety Awareness Event
    - Residents organize a day or week-long event in which they
        1) distribute flyers about speeding etc… to local residents
        2) post yard signs in support of safe driving
        3) conduct a citizen radar campaign
    - Santa Rosa County will send letters to each driver found to be speeding during the citizen radar campaign
    - Safety Awareness Event is supported by SMART Trailer and possibly Sheriff Deputy presence

- Enforcement: Sheriff's Department targets speeding enforcement over several weeks
    - Increased Patrols

- Engineering:
    - Striping (edgeline and centerline)
    - Signage
        1) Increased number of speed limit signs
        2) Fine notification signs
        3) "Watch for Children" signs
        4) "Neighborhood Traffic Watch" signs

4.4 Six to Nine Month Review Period

- County staff monitors situation periodically.
- At the end of the review period, staff meets with the Homeowner's Association or designated contact person to determine if the community's concerns have been mitigated.
- If the community still has concerns regarding traffic, the quantitative analysis is conducted again and compared to the established warrants and a streamlined field review is conducted. The established warrants must again be met before Level II activities are initiated.

4.5 Level II Traffic Improvement Plan

- Step 1: Develop traffic improvement plan- this plan includes physical measures deemed most appropriate given the results of both the quantitative and qualitative analyses.

- Step 2: Present plan to residents. This plan can be presented by County staff at a homeowner's association meeting or through active residents using a petition format. County staff will coordinate the plan with Emergency Responders during this step in the process.

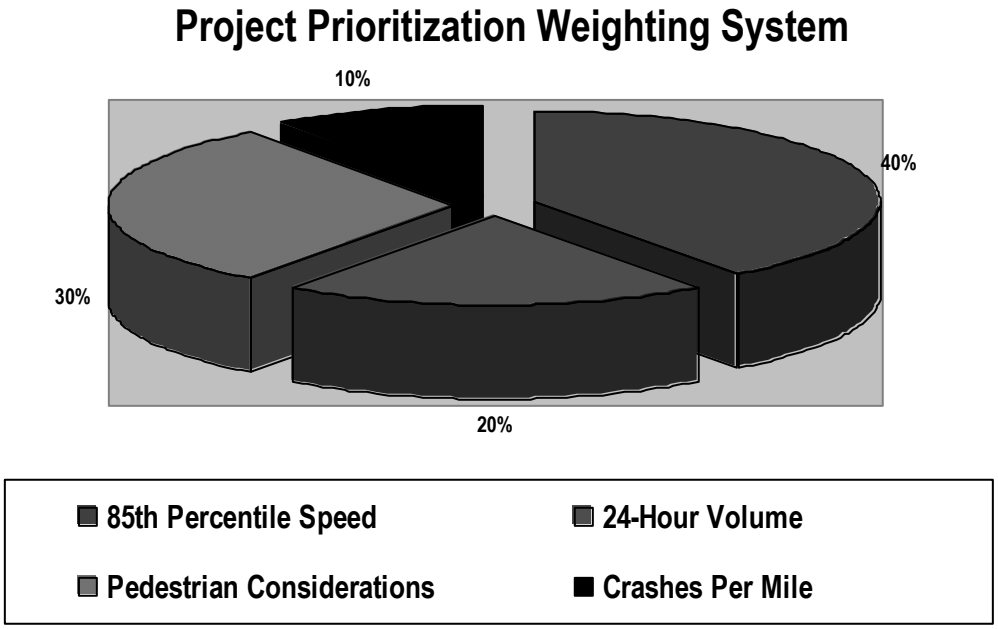
- Step 3: 75% of the local residents must sign a petition supporting installation of the planned improvements.

- Step 4: Rank the project for funding (if not privately funded). See ranking criteria below.

- Step 5: Implement Phase II as County funds become available or using private funding.

4.5.1 Ranking System for Project Prioritization

Projects will be ranked for public funding based on the following criteria. These criteria are weighted in terms of relative importance. The chart below illustrates the relative weights assigned to each category. Speed is given the highest weight, followed by pedestrian considerations, traffic volume and then vehicle crashes.



Point accumulation will be determined from the chart below. A total of 20 points is possible.

Category	Criteria	Points Assigned	Points Possible Per Category
85th Percentile Speed	Difference between 85th Percentile Speed and Posted Speed		8.0
	5mph	3.0	
	6mph	3.5	
	7mph	4.0	
	8mph	4.5	
	9mph	5.0	
	10mph	5.5	
	12mph	6.0	
	13mph	6.5	
	14mph	7.0	
	15mph	7.5	
	>15mph	8	
24-Hour Traffic Volume	501-1000	3.0	4.0
	1001-1500	3.5	
	1501-2000	4.0	
Annual Crashes Per Mile	2.0-2.9 crashes per mile	1.0	2.0
	≥ 3 crashes per mile	2.0	
Pedestrian Considerations	School Within or Adjacent to Street Segment	3.0	6.0
	Pedestrian generator within or adjacent to street segment	2.0	
	Absence of sidewalk along street segment	1.0	

4.6 Six to Nine Month Review Period: Staff monitors the situation periodically over the next six to nine months. If significant problems develop, Level II measures are re-evaluated. Targeted enforcement and education activities may also be conducted again.

APPENDIX A

Santa Rosa County Toolbox of Approved Traffic Calming Devices

1. Gateway Treatments

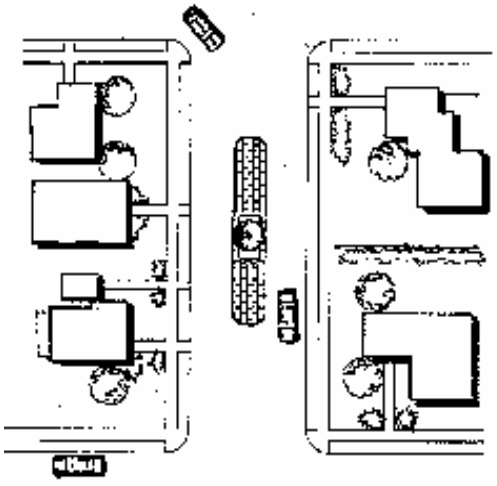
A center island at the beginning of a street that may include landscaping and/or a monument identifying the neighborhood. This device alerts drivers their driving behavior should change.

- Acceptable if right-of-way is available and drainage can be accommodated.
- Approximate Cost: $10,000

2. Midblock Median Treatments

An island installed midblock in the center of the street. It may be landscaped with trees and shrubs, grass only or completely concrete. This device is intended to slow traffic by narrowing the travel lanes and possibly shortening a driver's sight distance.

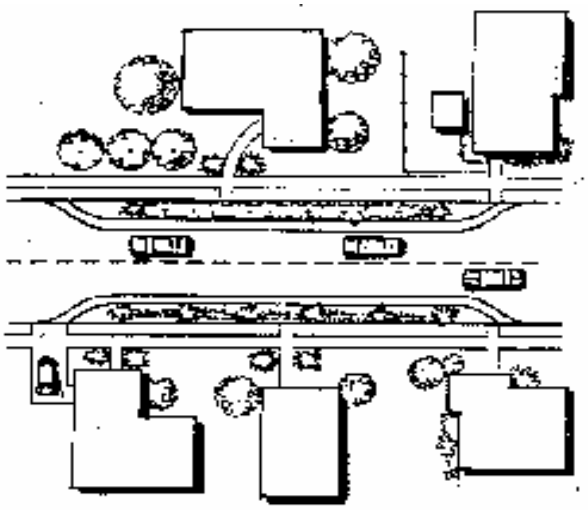
- Acceptable if right-of-way is available and drainage can be accommodated.
- Approximate Cost: $8000-$15,000 ($50/square foot)



3. Chokers/Neckdowns

Chokers are installed midblock, while neckdowns are used at intersections. These devices narrow the travel lanes, thereby slowing drivers.

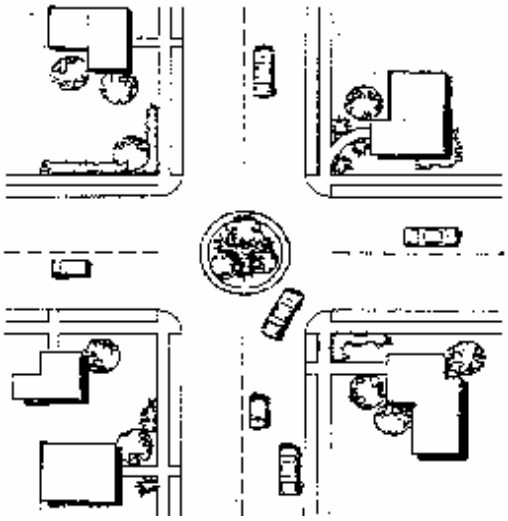
- One-lane chokers are not installed in Santa Rosa County.
- Minimum travel lane width shall be 8 feet
- Approximate Cost: $7000-$10,000



4. Traffic Circles/ Roundabouts

Traffic circles are raised circular placed in an intersection or at a midblock location. Drivers travel in a counterclockwise direction around the circle and vehicles approaching the intersection yield to vehicles already in the circle. This device is intended to slow traffic and possibly shorten sight distance.

- Not used in retrofit situations in Santa Rosa County, but can be designed into new construction.
- Approximate Cost: $2500-$15,000



5. Textured Pavements

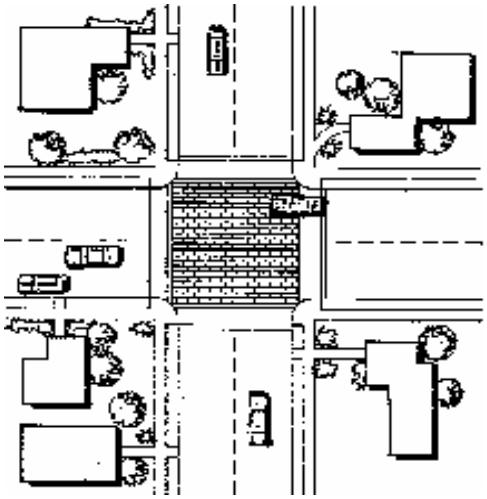
Textured pavement is used at intersections or at midblock pedestrian locations to alert drivers that a change in driving behavior is expected. Often this device is used in conjunction with other treatments such as raised crosswalks/ intersections, traffic circles and gateway treatments to enhance driver perception.

- Not used in retrofit situations in Santa Rosa County, but can be designed into new construction.
- Privately maintained streets only
- Approximate Cost: Varies

6. Raised Crosswalk/ Intersection

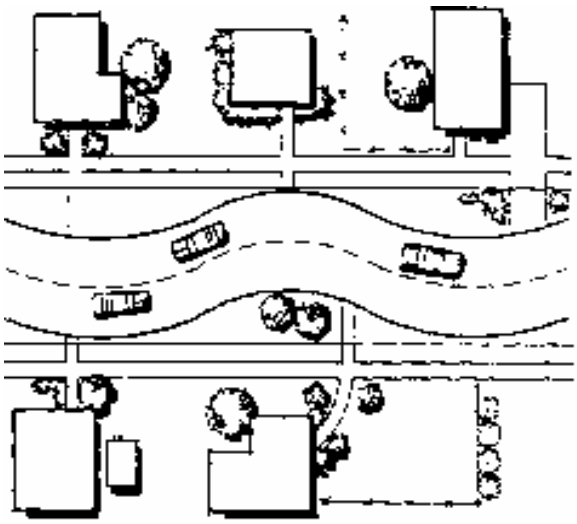
Raised Crosswalks/ Intersections are elevated to at least 4 inches above the surrounding streets. They are used to slow traffic in areas with high pedestrian volumes.

- Limited applicability for retrofits in Santa Rosa County.
- Approximate Cost: $15,000-$50,000



7. Chicanes

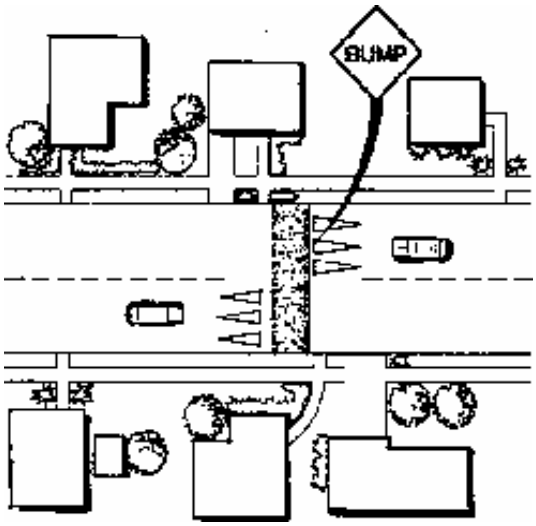
A serpentine curve in the street that forces traffic to slow in order to negotiate the road curvature. These devices can be curved or angled, but must be properly designed to ensure vehicles cannot travel a straight path down the center of the device.



- Limited applicability in Santa Rosa County due to right-of-way constraints and utility locations. Can be designed in new construction.
- Approximate Cost: $5000-$15,000

8. Speed Hump/ Speed Table

Speed humps are 3 to 4 inches high and at least 12 feet wide. They can have a sinusoidal, circular, parabolic or flat-topped design. These devices are used on strictly local, residential streets. Speed humps can increase noise due to acceleration/deceleration.



- May be applied on streets with curb and gutter only.
- Approximate Cost: $1500-$2500

APPENDIX B

TRAFFIC CALMING REQUEST FORM

Contact Name: _____ Phone: _____
Address: _____ Zip: _____
Email: _____ Neighborhood: _____

- Do you belong to a Neighborhood or Homeowner's Association or are you aware of one in your area? ☐ **Yes** ☐ **No**

  If yes, which one? _____

- Are you interested in participating in a Traffic Calming committee in your neighborhood? ☐ **Yes** ☐ **No**

- In general, what are your concerns about the traffic in your neighborhood? (check all that apply)
  - ☐ Speeding ☐ Cut-through traffic ☐ Number of Accidents
  - ☐ Exhibition Driving (i.e. donuts) ☐ High number of pedestrians
  - ☐ Other (please Explain) _____

- Are there specific streets or intersections that concern you? If so, please list them.

_____
_____
_____

- What concerns you about traffic at these locations?

_____
_____
_____
_____
_____

Please submit a map of the problem area with this form

- Do you have suggestions on how to improve traffic safety in your neighborhood?

_____
_____
_____
_____

To be considered for the traffic calming program 66% of the residents in your neighborhood or on your street must sign the attached petition. Please submit it and this form to:

Santa Rosa County
6051 Old Bagdad Highway
Milton, FL 32583

SANTA ROSA COUNTY
Request for Neighborhood Traffic Management

Signature

Printed Name

Address

Phone

Statement (if needed)

Signature

Printed Name

Address

Phone

Statement (if needed)

Signature

Printed Name

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